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| 10/718,539 | 11/24/2003 | Boris Liberman | 2786-0244P | 1809 |

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| EXAMINER |
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MENON, KRISHNAN S

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| ART UNIT | PAPER NUMBER |
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1723

| SHORTENED STATUTORY PERIOD OF RESPONSE | NOTIFICATION DATE | DELIVERY MODE |
|--|-------------------|---------------|
| 3 MONTHS | 02/14/2007 | ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 02/14/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/718,539 | Applicant(s) LIBERMAN, BORIS | |
| | Examiner Krishnan S. Menon | Art Unit 1723 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 1-17, 34 and 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claims 1-35 are pending as originally filed. Applicant elected claims 18-33, without traverse, in the response filed 11/20/06 to the restriction requirement of 10/18/06. Accordingly, claims 1-17 and 34-35 are withdrawn from consideration.

Claim Objections

The claims are objected to because they include reference characters which are not enclosed within parentheses.

Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m).

Claim 18 depends from a withdrawn claim 1. Applicant must amend claim 18 to make it independent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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1. Claims 18-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knappe et al., US 6,755,970 (PCT Published on Dec 28, 2000 as WO 00/78436) in view of Smith et al (US 5,403,479), with evidence from Espenan et al (US 6,001,254) and Goheen, et al (US 5,207,916).

Claims 18-22: Knappe teaches a reverse osmosis system which can be back-washed (figure 1) as claimed. This system has the high pressure feed pump, feed, permeate and concentrate lines, and valves and control system as claimed. The reverse osmosis module can have multiple membranes in series (figure 2). See column 1 line 9 – column 2 line 60.

Claims 18-22 differ from the teaching of the reference in the recitation of multiple modules in parallel with separate feed, permeate and concentrate connections. However, multiple modules in parallel is known in the art, as is seen in Espenan or Goheen. One would employ parallel modules for increasing capacity of the system. Moreover, providing parallel systems is only replication of the single module system, which has not patentable significance unless new and unexpected results is produced: In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). Any other differences between the specific connections, piping, etc., recited in the claims would be within the skill level of one of ordinary skill in the art, and are not patentable.

Claims 23-25, 27: Claim 23 recites a second source of dilute saline solution connected to the front end permeate. Knappe does not show such a connection even though additional cleaning solutions are contemplated. However, Smith and Espenan teach this type of connection – see figures. It would be obvious to one of ordinary skill

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in the art at the time of invention to provide additional connections for cleaning solutions, etc, as taught by Smith or Espenan in the teaching of Knappe.

2. Claims 28-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knappe et al., US 6,755,970 (PCT Published on Dec 28, 2000 as WO 00/78436) in view of Smith et al (US 5,403,479), with evidence from Espenan et al (US 6,001,254) and Goheen, et al (US 5,207,916) as applied to claim 18 above, and further in view of Yunoki (US 5,354,466).

Claims differ from the teaching of the references cited for claim 18 in the Permeate storage tank having an impermeable movable member, with the concentrate stream pressurizing the tank to dispel the permeate for back flush. Yunoki teaches this principle. It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Yunoki in this regard to take advantage of the feed pump itself to provide pressurized back-flush.

3. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knappe et al., US 6,755,970 (PCT Published on Dec 28, 2000 as WO 00/78436) in view of Smith et al (US 5,403,479), with evidence from Espenan et al (US 6,001,254) and Goheen, et al (US 5,207,916) as applied to claim 18 above, and further in view of Conger (US 4,141,825).

Claims differ from the teaching of the references cited for claim 18 in the energy recovery plant connected to the reverse osmosis plant. However, having energy

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recovery systems for recovering the energy of the concentrate stream from RO systems is well known in the art, as exemplified by Conger, which teaches about having turbines to recover such energy for use in pumping the feed of the RO unit itself, or for other purposes as generating electricity.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S. Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Krishnan S Menon
Primary Examiner
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